



### **REMARKS**

The Office Action dated March 2, 2006, has been received and carefully noted. The above amendments and the following remarks are submitted as a full and complete response thereto.

By this Amendment, claims 10-15 and 17-20 have been canceled and claims 9 and 16 have been amended. No new matter is presented. Support for the amendments to claims 9 and 16 can be found on at least page 20, line 18 to page 21, line 2 of the specification as originally filed. Claims 9 and 16 are pending and respectfully submitted for consideration.

#### **Rejections Under 35 U.S.C. § 112**

Claims 10-16 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. As claims 10-15 have been canceled, the rejection with respect to these claims is now rendered moot. Claim 16 has been amended to depend from claim 9. Accordingly, the Applicants respectfully submit that the amendment to claim 16 overcomes the rejection under 35 U.S.C. § 112, second paragraph. Accordingly, the Applicants respectfully request withdrawal of the rejection of claim 16.

#### **Rejections Under 35 U.S.C. § 102**

Claims 9, 12-17, 19 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Teramachi (Japanese Patent Publication No. 05052215, "Teramachi '215").

Claims 9, 12-17, 19 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Jacob et al. (U.S. Patent No. 5,156,462, "Jacob '462").

Claims 9, 12-17, 19 and 20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Jacob (U.S. Patent No. 4,944,607, "Jacob '607").

Claims 9, 12-17, 19 and 20 were rejected under 35 U.S.C. § 102(a) as being anticipated by Teramachi et al. (U.S. Patent No. 5,755,516, "Teramachi '516").

As discussed above, claims 12-15, 17, 19 and 20 have been canceled. Claims 9 and 16 are pending. Claim 16 depends from claim 9. The Applicants traverse the rejection and respectfully submit that claims 9 and 16 recite subject matter that is neither disclosed nor suggested by the cited references.

Teramachi '215 discloses a ball chain having resin-made chain unit elements 2, which hold a plurality of balls 11 arranged in a line with specified distances, the elements 2 being integrally connected to each other through resin-made hinge parts 3. The chain unit elements 2 are integrated with the hinge parts 3 by molding injection. The balls 11 are inserted into the molding die, and integration of the balls is carried out.

Jacob '462 discloses a ball guide 1 having a cage 6 that is produced by coiling a strip 8. The strip 8 is pre-manufactured and includes apertures 9 to retain balls 7 for the guidance of exterior component 2 and shaft 4 relative to each other. The side edges 15 and 16 of the strip 8 are discontinuously joined with each other by spot welds. See the Abstract of Jacob '462.

Jacob '607 discloses a revolving guiding means in the form of individual cassettes serving to guide rolling members, which are individually guided by cage elements having cylindrical portions having a production axis extending at a right angle between the centers of all rolling members contained in one cassette. See the Abstract of Jacob '607. Fig. 9 of Jacob '607 shows an embodiment of the revolving guiding

means having rolling members 12, 12a in the form of balls. The section extends through the center of the rolling members 12. It can also be seen that the cage element 13 is provided with two guiding extensions 16, 16a.

Teramachi '516 discloses an endless retainer 50 is a flexible belt-shaped member formed of a resin or like material, and a number of ball retaining holes 50a are formed with predetermined space from each other. The ball 3 is held by the inner peripheral surface of the respective ball retaining holes 50a to be freely rollable and slidable to thereby guide the balls along the entire periphery of the ball circulation passage 7. Spacers 50b, each having a recess of spherical crown shape corresponding to an outer spherical shape of the ball, are disposed between adjacent ball retaining holes 50a so as to squeeze the ball 3 from both axial sides of the retainer 50.

Claim 9, as amended, recites a stainless steel sheet formed in a strip shape and having a plurality of through holes, each through hole having a diameter larger than the diameter of the ball for containing the ball; and a plurality of ball holding members molded by synthetic resin material to the stainless steel sheet and interposed among the respective through holes, and including spherical seats for embracing a spherical face of each of the plurality of balls.

As a result of the claimed invention, a gap formed in a ring-like shape is formed between the through hole and the ball. However, the ball does not contact the stainless steel sheet while the ball rolls in the endless track of the linear guide device, because the ball is held in the center of the through hole by the spherical seats of the ball holding members. Accordingly, it is possible to reinforce the ball chain, as recited in claim 9, by using the stainless steel sheet.

With respect to claim 9, the Applicants respectfully submit that the cited references fail to disclose or suggest the claimed features of the invention. In particular, none of Teramachi '215, Jacob '462, Jacob '607 or Teramachi '516 disclose or suggest a stainless steel sheet formed in a strip shape and having a plurality of through holes, and a plurality of ball holding members being molded by a synthetic resin material to the stainless steel sheet. In contrast, Teramachi '215 discloses that chain unit elements 2 are integrated with the hinge parts 3 by molding injection. Jacob '462, in contrast, discloses that the strip 8 is manufactured by means of continuous injection-molding. Jacob '607 fails to disclose that the guiding extension 16 and film hinge 27 are formed of stainless steel. Teramachi '516, in contrast, discloses an endless retainer 50 as a flexible belt-shaped member formed of a resin or like material. As such, none of Teramachi '215, Jacob '462, Jacob '607 and Teramachi '516 discloses or suggests the features of the invention as recited in claim 9.

According to U.S. patent practice, a reference must teach every element of a claim in order to properly anticipate the claim under 35 U.S.C. §102. In addition, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628,631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "Every element of the claimed invention must be arranged as in the claim. . . . [t]he identical invention must be shown in as complete detail as is contained in the patent claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236 (Fed. Cir. 1989) (emphasis added). The Applicants respectfully submit that the cited references do not disclose or suggest the features of the invention as recited in claim 9. Accordingly,

Teramachi '215, Jacob '462, Jacob '607 and Teramachi '516 do not anticipate claim 9, nor is claim 9 obvious in view of these references. As such, the Applicants submit that claim 9 is allowable over the cited art.

Claim 16 depends from claim 9 and is allowable for at least the same reasons.

**Rejections Under 35 U.S.C. § 103**

Claims 10, 11 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Teramachi '215, as applied to claims 9 and 17 above, and further in view of Lunz (WO 92/14070).

Claims 10, 11 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jacob '462, as applied to claims 9 and 17 above, and further in view of Lunz.

Claims 10, 11 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jacob '607, as applied to claims 9 and 17 above, and further in view of Lunz.

Claims 10, 11 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Teramachi '516, as applied to claims 9 and 17 above, and further in view of Lunz.

As noted above, claims 10, 11 and 18 have been canceled. The Applicants note that Lunz was cited for teaching a connecting portion made of metal and ball holding portions comprising spherical seats and ball holding members molded from a synthetic resin material which is now recited in claim 9.

Claim 9 recites spherical seats for embracing a spherical face of each of the plurality of balls. In contrast, Lunz discloses a plurality of square through holes. See

Fig. 10. As shown in Lunz, Figures 9 and 10, there is a cage reinforced with a connecting belt 30. The connecting belt 30 has a plurality of square through holes for receiving the rollers 8. However, the rollers 8 can move in the axial direction freely in the square through hole, because the roller holding members 31 do not restrict the movement of the rollers 8 in the axial direction. As a result, both the end faces of the roller 8 may contact the metal connecting belt 30, while the roller 8 rolls in the endless track of the linear guide device. As such, Lunz fails to disclose or suggest at least the feature of spherical seats for embracing a spherical face of each of the plurality of balls, and the reference fails to disclose or suggest the critical and non-obvious advantages as recited in claim 9.

In view of the above, the Applicants respectfully submit that Lunz would fail to cure the deficiencies in Teramachi '215, Jacob '462, Jacob '607 and Teramachi '516 with respect to claim 9.

### **Conclusion**

The Applicants respectfully submit that claim 9 is allowable. Claim 16 depends from claim 9 and incorporates the patentable aspects thereof, and is therefore allowable for at least the same reasons as discussed above. Accordingly, the Applicants respectfully request withdrawal of the rejections, allowance of claims 9 and 16, and the prompt issuance of a Notice of Allowability.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing Attorney Dkt. No. 027905-00002.**

Respectfully submitted,



Rhonda L. Barton  
Attorney for Applicants  
Registration No. 47,271

**Customer No. 004372**

ARENT FOX PLLC

1050 Connecticut Avenue, N.W., Suite 400

Washington, D.C. 20036-5339

Tel: (202) 857-6000

Fax: (202) 638-4810

RLB/elz

Enclosure: Petition for Extension of Time (3-month)

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